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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,674	04/08/2005	Yasuhiro Miyamoto	Q87401	6928
23373	7590	12/06/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			PRESTON, ERIK D	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/530,674

Applicant(s)

MIYAMOTO ET AL.

Examiner

Erik D. Preston

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is/are objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/07/2005 + 9/20/05</u> | 6) <input checked="" type="checkbox"/> Other: <u>IDS: 09/20/2005</u> |

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DETAILED ACTION

Drawings

Figure 6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: There should be no mention of the claims in the Specification of the application.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether the limitations that are included in the parenthetical statement are part of the claimed invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 & 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyamoto et al (WO 99/41825 supplied by applicant).

With respect to claim 1, Miyamoto teaches a serial configuration linear motor constituted of a plurality of movers (Fig. 1, #31,32 & 33) each formed from an armature having a polyphase balancing winding, and a stator having a permanent magnet (Fig. 1, #1); wherein the plurality of movers are disposed so as to face each other with a gap therebetween on the single stator, and the polyphase balancing windings in the respective movers are connected in series (such as is seen in Fig. 8).

With respect to claim 2, Miyamoto teaches the liner motor of claim 1, wherein the plurality of movers are of the same configuration (as seen in Fig. 2a).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa et al. (JP 2002-136096 supplied by applicant) in view of Miyamoto et al (WO 99/41825 supplied by applicant).

With respect to claims 1-3, Maekawa teaches a serial configuration linear motor constituted of a plurality of movers each formed from an armature having a winding and a stator having a permanent magnet; wherein the plurality of movers are disposed so as to face each other with a gap therebetween on the stator, the windings being serially connected in series, connecting terminals (Fig. 1, #8a & 8b) are provided on front and rear ends of the movers, and winding terminals of a rear-end terminal in a final mover are short-circuited with each other (Fig. 1, #10), but it does not teach said winding being a polyphase balancing winding. However, Miyamoto teaches a linear motor having a polyphase balancing winding. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the winding of Maekawa in view of the winding as taught by Miyamoto because the winding of Miyamoto zeros the sum of cogging in the motor caused by the movers (Miyamoto, Abstract).

With respect to claim 4, Maekawa in view of Miyamoto teaches the linear motor of claims 1 and 2, and Miyamoto teaches that the number of phases of each of the plurality of movers is set to three phases, the number of movers is set to three (as seen in Fig. 1) and phases of the respective movers are shifted from one another by 120° (Abstract).

With respect to claim 5, Maekawa in view of Miyamoto teaches the linear motor of claims 1 & 2, Miyamoto teaches that a thermister is incorporated in each of the

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plurality of movers (Col. 8, Lines 49-51), and Maekawa teaches that terminals are provided on the front and rear ends of each of the movers. It would have been obvious to one of ordinary skill in the art at the time of the invention to connect the thermistors in series using the terminals as taught by Maekawa since it would not require the use of any additional elements in the invention of Maekawa in view of Miyamoto.

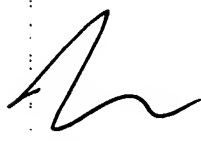
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 4958115, US 6476524 & US 2001/0010433

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik D. Preston whose telephone number is 571-272-8393. The examiner can normally be reached on Monday through Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


11/14/05


DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800